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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,471	12/12/2003	Takashi Murai	Q78941	8819

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EXAMINER

COMPTON, ERIC B

ART UNIT PAPER NUMBER

3726

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/733,471

Applicant(s)

MURAI ET AL.

Examiner

Eric B. Compton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-12 and 33-43 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10-12 and 33-43 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 10/093,373.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/12/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 34-35 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by JP10-175124 to Lee; U.S. Pats. 1,431,183 to Rockwell; 1,204,127 to Canda; and/or 665,905 to Hill.

Regarding claim 34-35, Samsung, Rockwell, Canda and/or Hill discloses the method as claimed for forging a wire material blank and removing flash.

Regarding claim 37, Canda discloses an ejector pin (22) for ejecting the blank balls. Likewise, Rockwell, in Figure 2, shows, a die having what appears to be an ejector.

3. Claims 38-43 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2001-050264 to NSK LTD.

NSK discloses rolling element for a bearing and a bearing incorporating such rolling element, wherein the rolling elements include an outer diameter portion with a rolling contact face that has curvatures in an axial direction thereof and a radial direction normal to the axial direction and including at least one plane. See Fig. 2. The roller bearing, having the same featured as claimed, is also discloses. See e.g., Fig. 1.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10-12, 33-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2001-050264 to NSK LTD in view of U.S. Pat. 1,784,463 to Nice.

NSK disclose the roller element disclose above. However, the reference is silent with respect to the method of forming the roller elements.

Nice discloses a method for forming a roller element comprising: forging a billet to form a ball blank and removing flesh to form to produce the rolling element shown in the Figure. The steps of forging a ball member were well known at that time. See JP10-175124 to Lee; U.S. Pats. 1,431,183 to Rockwell; 1,204,127 to Canda; and/or 665,905 to Hill (disclosing forging wire stock to form ball element).

In additional, the prior art is replete with examples of forging techniques for forming roller bearing elements. U.S. Pat. 1,701,736 discloses forming a tapered cylindrical roller bearing elements by a forging process. See *also* DD 122651. JP 07-185716 discloses a method for forming bearing elements having by a forging process. See *e.g.*, Fig. 2. U.S. Pat. 3,337,278 discloses various roller bearing element design which can be made by either of two methods: forging or casting. See Col. 3, lines 6-15. SU 706177 discloses forging die to form a roller bearing element having a flat bottom blended into a truncated cone. U.S. Pat. 2,867,00 discloses a rotary forging method to form roller elements having "pear-shape rather than spherical." Col. 3, lines 20-27. U.S. Pat. 5,976,053 discloses forging another type of roller element.

The prior thus clearly demonstrates that forging is known to form roller bearing elements, which are completely spherical (as noted in the prior rejection) and which have non-spherical attributes. One skilled in the art would be capable of adapting and modifying a forging process (and apparatus) for various roller designs.

Regarding claims 10 and 34-36, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have formed the roller element of NSK by forging and removing flesh, in light the teachings of Nice (and other cited prior art), in order to accurately size the blank requiring just minimal material removal. See *e.g.*, Nice, Col. 1, lines 7-28.

Further regarding claims 11, 34, and 37, Canda discloses an ejector pin (22) for ejecting the blank balls. Likewise, Rockwell, in Figure 2, shows, a die having what

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appears to be an ejector. In Nice, the ball blank is formed first, and then subjected to grinding.

Further regarding claim 12, in Nice, the blank ball thus forged has a connecting portion between the contact face and one of the at least plane and has predetermined radius of curvature.

Further regarding claim 33, Rockwell, Canda, and Hill all show a dimpled recess is formed during the forging process.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Compton whose telephone number is (571) 272-4527. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David p. Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Eric B. Compton
Primary Examiner
Art Unit 3726

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